Test Definition: PBOU

Lead Occupational Exposure, Random, Urine
(Non-Orderable)

Overview

Useful For

Only orderable as part of a profile. For more information see:
PBUOE / Lead Occupational Exposure, Random, Urine
HMUOE / Heavy Metal Occupational Exposure, with Reflex, Random, Urine

Detecting clinically significant lead exposure due to occupational exposure in random urine specimens

This test is **not a substitute** for blood lead screening.

Method Name

Only orderable as part of a profile. For more information see:
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HMUOE / Heavy Metal Occupational Exposure, with Reflex, Random, Urine

Triple-Quadrupole Inductively Coupled Plasma Mass Spectrometry (ICP-MS/MS)

NY State Available

Yes

Specimen

Specimen Type

Urine

Specimen Required

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Specimen Minimum Volume

1.5 mL

Reject Due To

All specimens will be evaluated at Mayo Clinic Laboratories for test suitability.

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container

Urine	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

Clinical & Interpretive

Clinical Information

Lead toxicity primarily affects the gastrointestinal, neurologic, and hematopoietic systems. An increased urine lead concentration relative to creatinine indicates significant lead exposure. Measurement of urine lead concentration relative to creatinine before and after chelation therapy has been used to assess lead exposure. A post-chelation lead concentration of up to 6 times the pre-chelation is normal.

Blood lead measurement is the best test for clinical correlation of toxicity. For more information see PBDV / Lead, Venous, with Demographics, Blood.

Reference Values

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Biological Exposure Index (BEI): <150 mcg/g creatinine

Interpretation

Urinary excretion of less than 4 mcg/g creatinine is not associated with any significant lead exposure.

Urinary excretion of more than 4 mcg/g creatinine is usually associated with pallor, anemia, and other evidence of lead toxicity.

Cautions

No significant cautionary statements

Clinical Reference

1. Kosnett MJ, Wedeen RP, Rotherberg SJ, et al. Recommendations for medical management of adult lead exposure. Environ Health Perspect. 2007;115(3):463-471
2. de Burbane C, Buchet JP, Leroyer A, et al. Renal and neurologic effects of cadmium, lead, mercury, and arsenic in children: evidence of early effects and multiple interactions at environmental exposure levels. Environ Health Perspect. 2006;114(4):584-590
3. Strathmann FG, Blum LM. Toxic elements. In: Rifai N, Chiu RWK, Young I, Burnham CD, Wittwer CT, eds. Tietz Textbook of Laboratory Medicine. 7th ed. Elsevier; 2023:chap 44
4. Hauptman M, Bruccoleri R, Woolf AD. An update on childhood lead poisoning. Clin Pediatr Emerg Med. 2017;18(3):181-192. doi:10.1016/j.cpem.2017.07.010

MAYO CLINIC LABORATORIES

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Performance

Method Description
The metal of interest is analyzed by triple-quadrupole inductively coupled plasma mass spectrometry.(Unpublished Mayo method)

PDF Report
No

Day(s) Performed
Monday through Friday

Report Available
2 to 4 days

Specimen Retention Time
14 days

Performing Laboratory Location
Mayo Clinic Laboratories - Rochester Superior Drive

Fees & Codes

Fees
- Authorized users can sign in to Test Prices for detailed fee information.
- Clients without access to Test Prices can contact Customer Service 24 hours a day, seven days a week.
- Prospective clients should contact their account representative. For assistance, contact Customer Service.

Test Classification
This test was developed and its performance characteristics determined by Mayo Clinic in a manner consistent with CLIA requirements. It has not been cleared or approved by the US Food and Drug Administration.

CPT Code Information
83655

LOINC® Information

Test ID	Test Order Name	Order LOINC® Value
PBOU	Lead Occupational Exposure	13466-8

Result ID	Test Result Name	Result LOINC® Value
608894	Lead Occupational Exposure	13466-8